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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,372	03/31/2004	Harold B. Dreyer	35856/121	5490

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EXAMINER

MAYO, TARA L

ART UNIT	PAPER NUMBER
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3671

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/814,372	Applicant(s) DREYER, HAROLD B.	
	Examiner TARA L. MAYO	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The Examiner notes that claims previously indicated allowable have been reviewed and rejected in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 October 2008 has been entered.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first support system connected to a sleeve formed at an upper edge of the upper curtain portion spaced apart from the central region and consisting of a plurality of pilings and one or more horizontal members spanning between adjacent pilings; and the second support system being connected to the central region and consisting of a plurality of pilings and one or more horizontal members spanning between adjacent pilings; and both the first and second support systems consisting of combinations of flotation units and a plurality of pilings

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and horizontal members must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Specification as originally filed fails to provide support for the claimed combination of a sleeve formed at an upper edge of the curtain portion, the upper edge being spaced apart from the central region, and the first support system connected to a sleeve formed at an upper edge of the upper curtain portion spaced apart from the central region and consisting of a plurality of pilings and one or more horizontal members spanning between adjacent pilings; and the second support system being connected to the central region and consisting of a plurality of pilings and one or more horizontal members spanning between adjacent pilings; and both the first and second support systems consisting of combinations of flotation units and a plurality of pilings and horizontal members.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the

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international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Bauer (U.S. Patent No. 6,346,193 B1).

Bauer '193, as best seen in Figures 3 and 4, shows a containment/exclusion boom comprising:

with regard to claim 21,

a boom curtain (B1) comprising an upper curtain portion (11) and a lower curtain portion (12) that are connected together at a central region (the region between the top and bottom of the boom), and a sleeve formed at an upper edge of the upper curtain portion, the upper edge being spaced apart from the central region, the upper and lower curtain portions each being formed of a sheet of flexible fabric material that allows the flow of water therethrough and during use, each acts to filter water flowing therethrough (col. 4, line 65 through col. 5, line 3);

means (22, 23) connected to the lower curtain portion, for maintaining the position of the lower curtain portion against the floor of a body of water during use; and

first and second support systems (13; 16 and 30) which can be positioned in a body of water and connected separately to distinct positions on the boom curtain, wherein the first support system is a floating support system comprising a plurality of floatation units (col. 5, lines 18 and 19) and the second support system is a structure comprising a plurality of pilings and one or more horizontal members spanning between adjacent pilings (col. 6, lines 4 through 14);

whereby the first and second support systems maintain both the upper and lower curtain portions in a substantially sloped arrangement upon introduction of the boom into the body of water.

8. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Gunderson, III et al. (U.S. Patent No. 6,485,229 B1).

The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Gunderson, III et al. ‘229, as seen in Figures 6 and 19, show a containment/exclusion boom (310) comprising:
with regard to claim 21,

a boom curtain (314) comprising an upper curtain portion (316) and a lower curtain portion (320) that are connected together at a central region (the region between elements 312 and 330), the upper and lower curtain portions each being formed of a sheet of flexible fabric material that allows the flow of water therethrough and, during use, acts to filter water flowing therethrough (col. 4, lines 11 through 14); and

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first and second support systems (312; and 44, 46; col. 12, lines 39 through 59) which can be positioned in a body of water and connected separately to distinct positions on the boom curtain (col. 12, lines 56 through 59), wherein the first support system is a floating support system comprising a plurality of floatation units (col. 12, line 41) and the second support system is a structure comprising a plurality of pilings and one or more horizontal members (col. 13, lines 10 through 19);

whereby the first and second support systems maintain at least one of the upper and lower curtain portions in a substantially sloped arrangement upon introduction of the boom into the body of water (col. 12, line 60 through 63).

Claim Rejections - 35 USC § 103

9. Claims 1, 5 through 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (U.S. Patent No. 6,346,193 B1) in view of Hallhagen (U.S. Patent No. 4,084,380 A).

Bauer '193, as best seen in Figures 3 and 4, shows a containment/exclusion boom comprising:

with regard to claim 1,

a boom curtain (B1) comprising an upper curtain portion (11) and a lower curtain portion (12) that are connected together at a central region (the region between the top and bottom of the boom), and a sleeve formed at an upper edge of the upper curtain portion, the upper edge being spaced apart from the central region, the upper and lower curtain portions each being formed of a sheet of flexible fabric material that allows the

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flow of water therethrough and during use, each acts to filter water flowing therethrough (col. 4, line 65 through col. 5, line 3);

means (22, 23) connected to the lower curtain portion, for maintaining the position of the lower curtain portion against the floor of a body of water during use; and

first and second support systems (13; 16 and 30) which can be positioned in a body of water and connected separately to distinct positions on the boom curtain, wherein the first support system is a floating support system comprising a plurality of floatation units (col. 5, lines 18 and 19) and the second support system is a structure comprising a plurality of pilings and one or more horizontal members spanning between adjacent pilings (col. 6, lines 4 through 14);

whereby the first and second support systems maintain both the upper and lower curtain portions in a substantially sloped arrangement upon introduction of the boom into the body of water;

with regard to claim 6,

wherein the means for maintaining comprise ballast connected to a lower end of the lower curtain portion;

with regard to claim 7,

wherein the means for maintaining comprise a y-panel anchoring system (22 and 38) connected to a lower end of the lower curtain portion;

with regard to claim 8,

wherein the flexible fabric material is a geosynthetic fabric (col. 4, lines 65 through 67);

with regard to claim 9,

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wherein the first support system comprises a floating support system (13);
with regard to claim 11,

wherein the first support system is a combination of a permanent or semi-permanent structure (additional stitched element 17 per col. 5, lines 38 through 41) and a floating support system (13); and

with regard to claim 12,

wherein the upper and lower curtain portions each define a plane, the upper and lower curtain portions being substantially aligned in coplanar relation.

Bauer '193 fails to teach:
with regard to claims 1 and 10,

wherein the second support system comprises a floating support system;
with regard to claim 13,

wherein the upper and lower curtain portion each define a plane, the upper and lower curtain portions being aligned in non-coplanar relation;
with regard to claim 14,

wherein the upper and lower curtain portions have a cross-sectional V-shaped configuration; and
with regard to claim 15,

the upper and lower curtain g portions each being formed of two sheets of flexible material.

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Hallhagen '380, as best seen in Figure 1, shows a containment boom comprising an upper curtain portion and a lower curtain portion, and a first support system (elements 5) and a second support system (elements 7), wherein the second support system comprises a plurality of flotation units connected to a central region, and further comprising ballast (6) connected to the central region.

With regard to claims 1 and 10, it would have been obvious to one having ordinary skill in the art at the time invention was made to modify the boom of Bauer '193 such that the second support system would include the plurality of flotation units as taught by Hallhagen '380 instead of the pilings and horizontal members, since buoyant members were known to be suitable for supporting containment apparatus in bodies of water and the artisan of ordinary skill would have had a reasonable expectation of success.

With regard to claim 5, it would have been obvious to one having ordinary skill in the art at the time invention was made to modify the boom of Bauer '193 such that it would further comprise ballast connected to the central region as taught by Hallhagen '380, since the same would have added stability to the apparatus while positioned in a body of water and the artisan of ordinary skill would have had a reasonable expectation of success.

With specific regard to claim 13, while the apparatus taught by the combination of Bauer '193 and Hallhagen '380 fails to expressly teach the upper and lower curtain portions being aligned in non-coplanar relation, the structural limitation is met by the prior art combination. Specifically, while positioned in a body of water the prior art

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boom is subject to movement caused by waves, ripples, ebbs, tides, etc. Any movement causing either the upper or lower curtain portion to move from an absolute vertical position causes curtain portions to be aligned in non-coplanar relation.

With regard to claim 14, while the apparatus taught by the combination of Bauer '193 and Hallhagen '380 fails to expressly teach the upper and lower curtain portions having a cross-sectional V-shaped configuration, the structural limitation is met by the prior art combination. Specifically, while positioned in a body of water the prior art boom is subject to movement caused by waves, ripples, ebbs, tides, etc. Any movement, such as an undercurrent, causing the section of the boom between its upper and lower edges to move would effect a V-shaped configuration in cross-section of the boom.

With regard to claim 15, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the boom apparatus taught by the combination of Bauer '193 and Hallhagen '380 such that each the upper and lower curtain portions would be formed of two sheets of flexible material, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With regard to claim 19, all of the claimed method steps are inherent to use of the apparatus taught by the combination of Bauer '193 and Hallhagen '380 with the exception of removing the water from the body of water after it pass through the curtain. However, it is an old and well known expedient in the art of fluid treatment to use flexible sheets of water pervious material to filter water before the water enters an intake, and one having ordinary skill in the art would have known to use the prior art apparatus to perform the method and would have had a reasonable expectation of success.

With regard to claim 20, all of the claimed method steps are inherent to the use of the apparatus taught by the combination of Bauer '193 and Hallhagen '380 with the exception of independently maintaining the upper and lower curtain portions at a sloped angle, relative to the water surface, between about 25 degrees and 65 degrees. However, it would have been an obvious design choice for one having ordinary skill in the art to modify the method of use of the prior art boom such that it would include the steps of positioning the upper and lower curtain portions as desired. Specifically, one having ordinary skill in the art would have found positioning the curtain portions as desired and effective way to provide filtration coverage to an area in a body of water, such as surrounding an intake or around a structure.

10. Claims 16 through 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (U.S. Patent No. 6,346,193 B1) in view of Hallhagen (U.S. Patent No. 4,084,380 A) as applied to claim 15 above, and further in view of Davidson et al. (U.S. Patent No. 3,713,540 A).

The combination of Bauer '193 and Hallhagen '380 fails to teach a gas injection system.

Davidson et al. '540, as best seen in Figures 1 through 4, disclose an apparatus for treating waste materials comprising a filter screen (18) used to remove solids from a liquid suspension and a gas injection system (24, 25, 26) used to keep the surface of the screen free from solids as it is moved through the suspension, wherein the gas injection system includes a source of compressed gas, a conduit in communication with source of compressed gas, and at least one outlet in the conduit.

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With regard to claims 16 through 18, it would have been obvious to one having ordinary skill in the art at the time of invention to further modify the apparatus taught by the combination of Bauer '193 and Hallhagen '380 such that it would include a gas injection system disclosed by Davidson et al. '540 with at least one outlet of the conduit positioned between the sheets of the upper curtain portion or the sheets of the lower curtain portion or both, as desired, to free the surfaces of the curtain portions of solids.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TARA L. MAYO whose telephone number is (571)272-6992. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TARA L MAYO/
Primary Examiner, Art Unit 3671

tlm
10 December 2008